**Abstract**

The invention relates to a thermode unit for connecting and/or electrically contacting a first semiconductor component to/with a support element and/or a second semiconductor component by heating an adhesive while applying pressure, wherein the thermode unit (1) comprises a main body (2) and a heating head unit (3) which can be displaced along the longitudinal axis (2a) thereof and is designed to press the first semiconductor component against the support element and/or the second semiconductor component during a heat transfer to the first semiconductor component, wherein a guide part (7) which can be displaced with the heating head unit (3) along the longitudinal axis (2) is mounted on its longitudinal side within the main body (2) in a linear manner by means of ball bearings or roller bearings, and the guide part (7) is designed in a piston-like manner at its first end (7b) which faces away from the heating head unit (3) and which is spaced apart by an air gap from an inner wall (8a) of a piston accommodating chamber (8) of complementary shape which is arranged in the main body (2).